

Agenda Item: Item 4
Meeting Date: June 7, 2007

Lead Scientist Report

Integrating Science Across Agencies

There are numerous major projects underway that require science input. These projects include the Interagency Ecological Program (IEP), Bay Delta Conservation Plan (BDCP), Delta Vision including the Delta Risk Management Strategy, End of Stage 1 Report and Delta Regional Ecosystem Restoration Implementation Plan (DRERIP). The Science Program is working to establish a coordinated process for providing the necessary science input.

Progress with IEP Lead Scientist

To oversee the science aspects of IEP, the IEP directors recommended that a new position of IEP Lead Scientist be established by the CALFED Bay-Delta Program (CBDP). As an employee of CBDP, the IEP Lead Scientist would split his/her time between Department of Fish and Game's office in Stockton, where he/she will work directly with the new IEP Manager, and the CBDP office in Sacramento to improve coordination and collaboration with IEP's other participating agencies, CALFED Science and stakeholders. The IEP Coordinators are developing a Duty Statement that recommends the programmatic reporting structure for the new position for the consideration of the Directors. General responsibilities for the position include scientific oversight of IEP monitoring and research, coordinating periodic scientific reviews of existing IEP monitoring and research activities, identifying the future scientific needs of the IEP participating agencies, identifying monitoring and research to meet those needs, facilitating coordination and collaboration among IEP agencies, CALFED, the San Francisco Estuary Institute and others to meet those needs, and representing the IEP in various public forums.

Bay Delta Conservation Plan (BDCP)

Denise Reed was named BDCP lead scientist by the BDCP Steering Committee. Bruce DiGennaro and Wayne Spencer were named co-facilitators. The roles of lead scientist and the facilitation team are identified in a scope of work approved by the BDCP Steering Committee (http://resources.ca.gov/bdcp/docs/5.4.07_HO_Facilitator-Lead_Scientist.pdf). First steps for the facilitation team in coordination with the lead scientist are developing communication guidelines, identifying additional science advisors, and a schedule for independent science input to BDCP.

Delta Risk Management Strategy (DRMS)

As previously reported, the Science Program, under the auspices of the ISB, is coordinating an independent review of the DRMS products. DRMS Phase 1 is an effort to evaluate the potential economic, environmental and public health and safety impacts of Delta and Suisun Marsh levee failures. Phase 2 of DRMS will develop and evaluate risk reduction strategies. The purpose of the independent review is to assist DRMS in making their analysis as accurate and effective as possible by providing an unbiased evaluation of DRMS technical methods, analyses, findings and conclusions. Comments of the review team will be publicly available.

The completion dates of the DRMS Phase 1 and Phase 2 products have been pushed back due to the amount of work and ambitious timeline. To adjust to the new schedule the Independent Review Panel (IRP) has had to re-structure its review format and reschedule accordingly.

The current schedule of DRMS and IRP Products is:

Product	Completion Date	Meeting Format
DRMS Phase 1 (Risk Analysis) Report	15-Jun-07	
IRP Phase 1 Review Document Released	1-Aug-07	Conference calls and e-mails
DRMS Phase 2 (Risk Reduction) Report	1-Oct-07	
IRP Phase 2 Review Document Released	20-Nov-07	3-Day Panel Meeting in November

A detailed schedule for public comments, response by the DRMS team, and a final response by the ISB is currently being drafted.

The Administrative Draft of the DRMS Phase 1 Report has been completed, received internal comments from the DRMS steering committee, and is being redrafted for public release and IRP review based on the above schedule. Due to the tight timeline, the DRMS team has been forced to begin work on the DRMS Phase 2 Report before completion of the Phase 1 Report and review. Currently, the Phase 2 report will involve analyzing 3 risk reduction scenarios. These scenarios are not anticipated to be final solutions, but instead, will serve to refine the list of possible scenarios and illustrate how the Phase 2 risk reduction evaluation functions. It is anticipated that DRMS tools will be used beyond the Phase 2 Report as part of the Delta Vision Process to continually refine and shorten the list of possible scenarios.

Delta Regional Ecosystem Restoration Implementation Plan (DRERIP)

The DRERIP process is currently focused on development of ecosystem conceptual models and life history models for key species, along with refinement of the scientific evaluation (vetting) approach.

The Science Program assists with the planning and coordination of DRERIP activities and participates on the Adaptive Management Planning Team (AMPT). Science Program staff is also involved in the development of a conceptual model for fish habitat, tidal marsh habitat, and low dissolved oxygen. Staff members are also developing

methods to convert the conceptual models into a web-based format for posting and are now beginning those conversions. To facilitate the effort, the Science Program provides contracting assistance in conjunction with the USGS.

The DRERIP conceptual models and vetting process were designed to evaluate restoration actions from the ERP planning documents, but will have broader applicability to efforts such as the Bay-Delta Conservation Plan (BDGP) and Delta Vision. Additionally the conceptual models will provide a scientific foundation for development of monitoring and performance measures, as well as reference material for the State of Science report. The conceptual models are scheduled to be finalized by the end of June, and vetting is scheduled to begin this summer.

Variable Delta Hypothesis

The “Variable Delta Hypothesis,” which was originally outlined in the Public Policy Institute of California (PPIC) report “Envisioning Futures for the Sacramento-San Joaquin Delta,” suggests that increasing the variability of estuarine habitat attributes, like salinity and water residence time in the Delta, will improve habitat conditions for native estuarine fishes (and the introduced sport fish striped bass), and decrease habitat suitability for undesirable invasive species like *Corbula amurensis* and *Egeria densa*. The authors of the PPIC report suggest a 15 point scenario for a variable Delta (Attachment 1). The Science Program has initiated a process to clarify more precisely what is meant by a variable Delta and the ecological implications of such variability beginning with an internal science workshop on variable salinity in April followed by a public one-day technical workshop scheduled for June 11, 2007 (Attachment 2). The objective of the June 11 workshop is to discuss key aspects of the “Variable Delta Hypothesis” and to explore and clarify the state of science on which it is based.

Science Communication

On-Line Journal – San Francisco Estuary and Watershed Science

A contract to move the management responsibility of the Journal and its companion Archive to the Center of Watershed Sciences at UC Davis will soon be in place. The Science Program will continue to co-sponsor the Journal and be actively involved in operations through the Lead Scientist and Deputy Director for Science. Once the contract is in place, the Watershed Center will begin searching for a new Editor in Chief and Managing Editor.

State of Science for the Bay-Delta System (SOSBDS) Report

The Science Program has begun drafting the SOSBDS report. Jana Machula, Managing Editor for the report will provide a detailed report on progress on June 8th, Agenda item 2.

Science Program Website

In conjunction with a revision of the CALFED Program website, the Science Program is evaluating how to revise the Science Program web pages. A new format has been

developed and is being discussed internally. Revision of web page content is also underway. Revisions will be incorporated over the next few months with the new and improved websites to be unveiled later this summer.

Publications

Three issues of Science News have been distributed via email. Science News is an electronic publication that highlights activities of the Science Program. Staff has also been discussing other publications for development. In the past, the Science Program distributed Management Cues and Science in Action - documents to communicate relevant scientific advances to resource managers and policymakers. These publications as well as a briefing book for legislators are planned to be developed in the coming months.

Briefing to the US Department of Interior

The Science Program has been asked by the Department of Interior to organize a CALFED science briefing for the Department. We will take a small group of scientists to Washington DC to relay critical CALFED science to key officials in the Department as well as group of Congressional representatives. The current plan is that the Lead Scientist will give an overview of science supported by CALFED and the individual scientists will give more detailed presentations on specific science issues. USGS Scientists that join the group will also brief staff at USGS Headquarters in Reston, Virginia. The trip is being planned for July or August 2007.

CALFED Science Fellows Program Update – 2007 Solicitation

The Science Program recently closed its 2007 CALFED Science Fellows Program solicitation. Fellowships will be awarded for proposals that address the priority issues as outlined in the 2006 Science Program's Proposal Solicitation Package (PSP) or specific needs identified by CALFED Implementing Agencies. The 2006 PSP Priority Areas include use of environmental water, aquatic invasive (exotic) species, trends and patterns of populations and system response to a changing environment, and habitat availability and response to change. The CALFED Implementing Agency science needs include questions about the Environmental Water Account, climate change effects, Pelagic Organism Decline (POD), use of a systems modeling approach for identifying critical linkages, and developing indicators and performance measures. More information on the solicitation can be found at http://www.csgc.ucsd.edu/EDUCATION/CALFED/CBDA_RFA2007.html.

Program Building

Program Staff

The Science Program has announced several staff changes in the past month. Lauren Hastings has been named Acting Deputy Director for the program. She will take over the position for retiring Deputy Director Ron Ott July 1st. Steve Culberson has accepted new responsibilities as the Science Program's modeling coordinator covering Delta hydrodynamics and water operations modeling efforts. In this role he will be the Science Program liaison to the California Water and Environmental Modeling Forum. Culberson

will continue working on the State of Science for the Bay-Delta System report. Matt Nobriga will take on the role as Science Program liaison to the IEP in addition to his Environmental Water Account duties. Looking to the future we hope to add additional technical staff as well as additional management and administrative staff to take some of the contracting load off technical staff. Addition of the IEP lead scientist to the team will increase our scientific muscle.

Individual Staff Activities

As we did at the last ISB meeting, we would like to highlight the work of several staff members to help the ISB get to know the people behind the program.

Dusty Boeger is the Science Program webmaster and website designer. He is currently working on completing the redesign of both the CALFED Bay-Delta Program and Science Program websites. Dusty is also a member of the team dedicated to converting the DRERIP conceptual models to a web-based delivery system. While his current projects focus primarily on technology and the Internet, Dusty's educational background includes a BA in English with emphasis on creative writing from the University of California at Davis. Before he joined the Science Program, his career accomplishments included riding the technology roller coaster at a highly regarded Silicon Valley start-up, a short stint as a professional sea urchin diver, and co-author of the book "Education Corruption in the State of California".

Jana Machula is the Managing Editor for the *State of Science of the Bay-Delta System Report* and Program Coordinator for the CALFED Fellows Program. Since joining the Science Program in 2003, Jana has worked on numerous diverse projects ranging from writing annual updates to strategic program plans and annual reports to organizing issue focused workshops and panel reviews. Motivated by her professional interest in communication of scientific information, she has organized and chaired conference sessions, participated on conference organizing committees, and acted as a poster program chair for past two CALFED Science Conferences. Jana also serves on the Board of Directors for the Northern California Society of Environmental Toxicology and Chemistry, a regional, scientific non-profit organization established to provide a forum for individuals and institutions engaged in the study of environmental problems, management and regulation of natural resources, education, research and development, and manufacturing and distribution in Northern California. Jana is an alumna of University of California, Davis and Berkeley.

Robert Ullrey is the research writer for the Science Program and editor of the *Science News*. Like Dusty, Robert is also on the development team for converting the DRERIP conceptual models into web applications as well as the redesign of the Science Program web pages. Additionally, he will serve as copy editor of the *State of Science of the Bay-Delta System Report*. Robert's previous work includes analysis of public policy, authoring college course books, and conflict mediation. He graduated with honors in Government and International Relations from California State University, Sacramento and has received recognition for scholarship from the American Political Science Association.

Attachments:

Attachment 1 – 15 point scenario for a variable Delta.

Attachment 2 – Science Program Variable Delta Workshop notice

Program Contact:

Ron Ott

Deputy Director for Science

CALFED Bay-Delta Program

ronott@calwater.ca.gov

Phone: (916) 445-2168